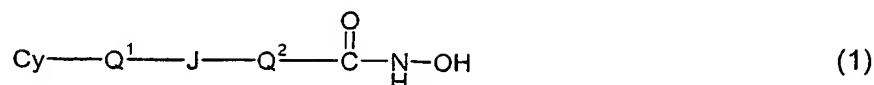


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CLAIMS

1. A compound of the formula:



wherein:

J is a linking functional group and is independently:

-C(=O)- or -O-C(=O)- or -C(=O)-O-;

Cy is a cyclyl group and is independently:

C₃₋₂₀carbocyclyl, C₃₋₂₀heterocyclyl, or C₅₋₂₀aryl;

and is optionally substituted;

Q¹ is a cyclyl leader group, and is independently a divalent bidentate group obtained by removing two hydrogen atoms from a ring carbon atom of a saturated monocyclic hydrocarbon having from 4 to 7 ring atoms, or by removing two hydrogen atoms from a ring carbon atom of saturated monocyclic heterocyclic compound having from 4 to 7 ring atoms including 1 nitrogen ring atom or 1 oxygen ring atom; and is optionally substituted;

Q² is an acid leader group, and is independently:

C₁₋₈alkylene;

and is optionally substituted;

or:

Q² is an acid leader group, and is independently:

C₅₋₂₀arylene;

C₅₋₂₀arylene-C₁₋₇alkylene;

C₁₋₇alkylene-C₅₋₂₀arylene; or,

C₁₋₇alkylene-C₅₋₂₀arylene-C₁₋₇alkylene;

and is optionally substituted;

and pharmaceutically acceptable salts, solvates, amides, esters, ethers, chemically protected forms, and prodrugs thereof.

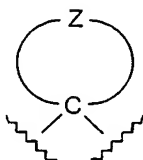
2. A compound according to claim 1, wherein J is -O-C(=O)- or -C(=O)-O-.

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3. A compound according to claim 1, wherein J is $-\text{O}-\text{C}(=\text{O})-$.
4. A compound according to claim 1, wherein J is $-\text{C}(=\text{O})-\text{O}-$.
5. A compound according to claim 1, wherein J is $-\text{C}(=\text{O})-$.

* * *

6. A compound according to any one of claims 1 to 6, wherein Q^1 is independently a group of the formula:



wherein:

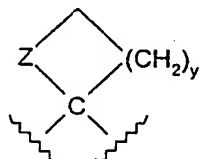
the ring independently has from 4 to 7 ring atoms;

Z is independently $-\text{CH}_2-$, $-\text{N}(\text{R}^N)-$ or $-\text{O}-$;

R^N , if present, is independently $-\text{H}$, C_{1-7} alkyl (including, e.g., C_{5-20} aryl- C_{1-7} alkyl), C_{3-20} heterocyclyl, or C_{5-20} aryl; and

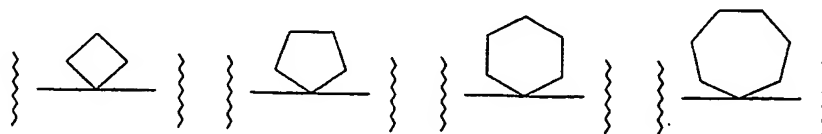
Q^1 is optionally further substituted.

7. A compound according to claim 6, wherein Q^1 is independently a group of the formula:

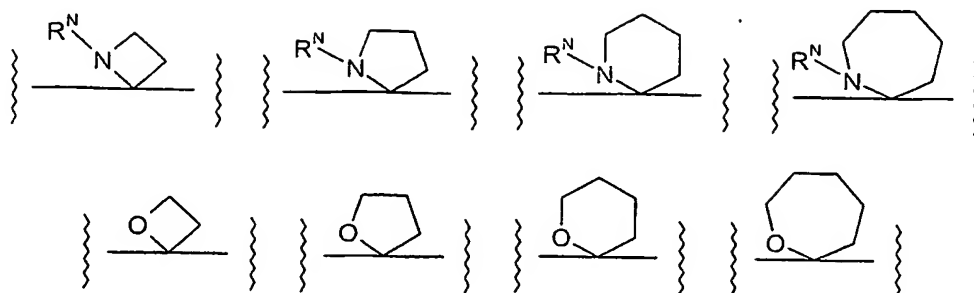


wherein y is independently 1, 2, 3, or 4.

8. A compound according to claim 7, wherein Q^1 is independently selected from:



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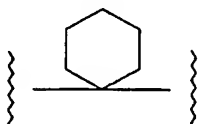


9. A compound according to claim 8, wherein Q¹ is independently:

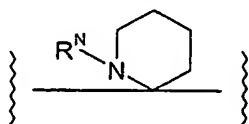


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10. A compound according to claim 8, wherein Q¹ is independently:



- 10 11. A compound according to claim 8, wherein Q¹ is independently:



* * *

- 15 12. A compound according to any one of claims 6 to 11, wherein R^N, if present, is independently selected from: -H, -Me, -Et, -Ph, and -CH₂-Ph.

- 20 13. A compound according to any one of claims 6 to 11, wherein R^N, if present, is independently -H.

* * *

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14. A compound according to any one of claims 1 to 13, wherein substituents on Q¹, if present, are independently selected from: -F, -Cl, -Br, -I, -OH, -OMe, -OEt, -O(iPr), -Ph, -C(=O)Me, -NH₂, -NMe₂, -NEt₂, morpholino, -CONH₂, -CONMe₂, -NHCOMe, and =O; and wherein, if a substituent is on an arylene group (e.g., phenylene), it may additionally be selected from: -Me, -Et, -iPr, -tBu, -CF₃.

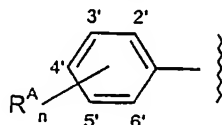
* * *

15. A compound according to any one of claims 1 to 14, wherein Cy is independently C₃₋₂₀carbocyclyl; and is optionally substituted.
16. A compound according to any one of claims 1 to 14, wherein Cy is independently C₃₋₂₀heterocyclyl; and is optionally substituted.
17. A compound according to any one of claims 1 to 14, wherein Cy is independently C₅₋₂₀aryl; and is optionally substituted.
18. A compound according to any one of claims 1 to 14, wherein Cy is independently C₅₋₂₀carboaryl or C₅₋₂₀heteroaryl; and is optionally substituted.
19. A compound according to any one of claims 1 to 14, wherein Cy is independently C₅₋₂₀aryl derived from one of the following: benzene, pyridine, furan, indole, pyrrole, imidazole, naphthalene, quinoline, benzimidazole, benzothiofuran, fluorene, acridine, and carbazole; and is optionally substituted.
20. A compound according to any one of claims 1 to 14, wherein Cy is independently C₅₋₂₀aryl derived from benzene and is optionally substituted.

* * *

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21. A compound according to any one of claims 1 to 14, wherein Cy is independently an optionally substituted phenyl group of the formula:



wherein n is independently an integer from 0 to 5, and each R^A is independently a substituent.

22. A compound according to claim 21, wherein n is 0.
23. A compound according to claim 21, wherein n is 1, and the R^A group is in the 4'-position.
24. A compound according to claim 21, wherein n is 2, and one R^A group is in the 4'-position, and the other R^A group is in the 2'-position.
25. A compound according to claim 21, wherein n is 2, and one R^A group is in the 4'-position, and the other R^A group is in the 3'-position.

* * *

26. A compound according to any one of claims 1 to 25, wherein each of the substituents on Cy, if present, is independently selected from:

- (1) ester;
- (2) amido;
- (3) acyl;
- (4) halo;
- (5) hydroxy;
- (6) ether;
- (7) C₁₋₇alkyl, including substituted C₁₋₇alkyl;
- (8) C₅₋₂₀aryl, including substituted C₅₋₂₀aryl;
- (9) sulfonyl;
- (10) sulfonamido.

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27. A compound according to any one of claims 1 to 25, wherein each of the substituents on Cy, if present, is independently selected from:
- (1) $-C(=O)OR^1$, wherein R^1 is independently C_{1-7} alkyl as defined in (7);
 - (2) $-C(=O)NR^2R^3$, wherein each of R^2 and R^3 is independently -H or C_{1-7} alkyl as defined in (7);
 - (3) $-C(=O)R^4$, wherein R^4 is independently C_{1-7} alkyl as defined in (7) or C_{5-20} aryl as defined in (8);
 - (4) -F, -Cl, -Br, -I;
 - (5) -OH;
 - (6) $-OR^5$, wherein R^5 is independently C_{1-7} alkyl as defined in (7) or C_{5-20} aryl as defined in (8);
 - (7) C_{1-7} alkyl, including substituted C_{1-7} alkyl, e.g.,
 - halo- C_{1-7} alkyl;
 - amino- C_{1-7} alkyl (e.g., $-(CH_2)_w$ -amino);
 - carboxy- C_{1-7} alkyl (e.g., $-(CH_2)_w$ -COOH);
 - hydroxy- C_{1-7} alkyl (e.g., $-(CH_2)_w$ -OH);
 - C_{1-7} alkoxy- C_{1-7} alkyl (e.g., $-(CH_2)_w$ -O- C_{1-7} alkyl);
 - C_{5-20} aryl- C_{1-7} alkyl;
 - wherein w is 1, 2, 3, or 4;
 - (8) C_{5-20} aryl, including substituted C_{5-20} aryl;
 - (9) $-SO_2R^7$, wherein R^7 is independently C_{1-7} alkyl as defined in (7) or C_{5-20} aryl as defined in (8);
 - (10) $-SO_2NR^8R^9$, wherein each of R^8 and R^9 is independently -H or C_{1-7} alkyl as defined in (7).
28. A compound according to any one of claims 1 to 25, wherein each of the substituents on Cy, if present, is independently selected from:
- (1) $-C(=O)OMe$, $-C(=O)OEt$, $-C(=O)O(Pr)$, $-C(=O)O(iPr)$, $-C(=O)O(nBu)$, $-C(=O)O(sBu)$, $-C(=O)O(iBu)$, $-C(=O)O(tBu)$, $-C(=O)O(nPe)$;
 - $-C(=O)OCH_2CH_2OH$, $-C(=O)OCH_2CH_2OMe$, $-C(=O)OCH_2CH_2OEt$;
 - (2) $-(C=O)NH_2$, $-(C=O)NMe_2$, $-(C=O)NEt_2$, $-(C=O)N(iPr)_2$, $-(C=O)N(CH_2CH_2OH)_2$;
 - (3) $-(C=O)Me$, $-(C=O)Et$, $-(C=O)-cHex$, $-(C=O)Ph$;
 - (4) -F, -Cl, -Br, -I;
 - (5) -OH;
 - (6) $-OMe$, $-OEt$, $-O(iPr)$, $-O(tBu)$, $-OPh$;
 - $-OCF_3$, $-OCH_2CF_3$;

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-OCH₂CH₂OH, -OCH₂CH₂OMe, -OCH₂CH₂OEt;
 -OCH₂CH₂NH₂, -OCH₂CH₂NMe₂, -OCH₂CH₂N(iPr)₂;
 -OPh, -OPh-Me, -OPh-OH, -OPh-OMe, O-Ph-F, -OPh-Cl, -OPh-Br, -OPh-I;
 (7) -Me, -Et, -nPr, -iPr, -nBu, -iBu, -sBu, -tBu, -nPe;
 5 -CF₃, -CH₂CF₃;
 -CH₂CH₂OH, -CH₂CH₂OMe, -CH₂CH₂OEt;
 -CH₂CH₂NH₂, -CH₂CH₂NMe₂, -CH₂CH₂N(iPr)₂;
 -CH₂-Ph;
 (8) -Ph, -Ph-Me, -Ph-OH, -Ph-OMe, -Ph-F, -Ph-Cl, -Ph-Br, -Ph-I;
 10 (9) -SO₂Me, -SO₂Et, -SO₂Ph;
 (10) -SO₂NH₂, -SO₂NMe₂, -SO₂NEt₂.

29. A compound according to any one of claims 1 to 25, wherein each of the substituents on Cy, if present, is independently selected from:
- 15 -C(=O)OMe, -OMe, -C(=O)Me, -SO₂Me, -SO₂NMe₂, -C(=O)NH₂, -OCF₃, and -CH₂CH₂OH.

* * *

- 20 30. A compound according to any one of claims 1 to 29, wherein the acid leader group, Q², is independently:
 C₅₋₂₀arylene;
 and is optionally substituted.
- 25 31. A compound according to any one of claims 1 to 29, wherein Q² is independently C₅₋₆arylene; and is optionally substituted.
32. A compound according to any one of claims 1 to 29, wherein Q² is independently phenylene; and is optionally substituted.
- 30 33. A compound according to claim 32, wherein the phenylene linkage is meta or para.
34. A compound according to claim 32, wherein the phenylene linkage is meta.
- 35 35. A compound according to claim 32, wherein the phenylene linkage is para.

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36. A compound according to any one of claims 30 to 35, wherein Q^2 is independently unsubstituted.

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* * *

37. A compound according to any one of claims 1 to 29, wherein the acid leader group, Q^2 , is independently:
 C_{1-8} alkylene;
and is optionally substituted.

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38. A compound according to any one of claims 1 to 29, wherein Q^2 is independently:
(a) a saturated C_{1-7} alkylene group; or:
(b) a partially unsaturated C_{2-7} alkylene group; or:
(c) an aliphatic C_{1-7} alkylene group; or:
(d) a linear C_{1-7} alkylene group; or:
(e) a branched C_{2-7} alkylene group; or:
(f) a saturated aliphatic C_{1-7} alkylene group; or:
(g) a saturated linear C_{1-7} alkylene group; or:
(h) a saturated branched C_{2-7} alkylene group; or:
(i) a partially unsaturated aliphatic C_{2-7} alkylene group; or:
(j) a partially unsaturated linear C_{2-7} alkylene group; or:
(k) a partially unsaturated branched C_{2-7} alkylene group;
and is optionally substituted.

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39. A compound according to any one of claims 1 to 29, wherein Q^2 is independently selected from:
 $-(CH_2)_5-$; $-(CH_2)_6-$; $-(CH_2)_7-$; and $-(CH_2)_8-$.

30

* * *

40. A compound according to any one of claims 1 to 29, wherein Q^2 is independently:
 C_{5-20} arylene- C_{1-7} alkylene;
 C_{1-7} alkylene- C_{5-20} arylene; or,
 C_{1-7} alkylene- C_{5-20} arylene- C_{1-7} alkylene;
and is optionally substituted.

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41. A compound according to any one of claims 1 to 29, wherein Q² is independently:
C₅₋₆arylene-C₁₋₇alkylene;
C₁₋₇alkylene-C₅₋₆arylene; or,
5 C₁₋₇alkylene-C₅₋₆arylene-C₁₋₇alkylene;
and is optionally substituted.

42. A compound according to any one of claims 1 to 29, wherein Q² is independently:
phenylene-C₁₋₇alkylene;
10 C₁₋₇alkylene-phenylene; or,
C₁₋₇alkylene-phenylene-C₁₋₇alkylene;
and is optionally substituted.

* * *

43. A compound according to any one of claims 1 to 42, wherein Q² independently
has a backbone of from 5 to 6 atoms.

* * *

44. A compound according to any one of claims 1 to 43, wherein each of the
substituents on Q², if present, is independently selected from:
halo, hydroxy, ether (e.g., C₁₋₇alkoxy), C₅₋₂₀aryl, acyl, amino, amido,
acylamido, nitro, and oxo; and wherein, if a substituent is on an arylene group
25 (e.g., phenylene), it may additionally be selected from: C₁₋₇alkyl, including
substituted C₁₋₇alkyl.

45. A compound according to any one of claims 1 to 43, wherein each of the
substituents on Q², if present, is independently selected from: -F, -Cl, -Br, -I, -OH, -
30 OMe, -OEt, -O(iPr), -Ph, -C(=O)Me, -NH₂, -NMe₂, -NEt₂, morpholino, -CONH₂,
-CONMe₂, -NHCOMe, -NO₂, and =O; and wherein, if a substituent is on an arylene
group (e.g., phenylene), it may additionally be selected from: -Me, -Et, -iPr, -tBu, -
CF₃.

* * *

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46. A compound according to claim 1, selected from the following compounds, and pharmaceutically acceptable salts, solvates, amides, esters, ethers, chemically protected forms, and prodrugs thereof:

PX118478,

PX118479,

PX118480,

PX119101,

PX118925,

PX118926,

PX118959,

PX118966,

PX119058,

PX119059,

PX119061,

PX119062,

PX119064,

PX119065,

PX119084,

PX119100,

PX119063,

PX119085,

PX119086,

PX119102, and

PX119103.

* * *

47. A composition comprising a compound as defined in any one of claims 1 to 46 and a pharmaceutically acceptable carrier.

48. A compound as defined in any one of claims 1 to 46 for use in a method of treatment of the human or animal body by therapy.

49. A compound as defined in any one of claims 1 to 46 for use in a method of treatment of a condition mediated by HDAC of the human or animal body by therapy.

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50. A compound as defined in any one of claims 1 to 46 for use in a method of treatment of a proliferative condition of the human or animal body by therapy.

5 51. A compound as defined in any one of claims 1 to 46 for use in a method of treatment of cancer of the human or animal body by therapy.

52. A compound as defined in any one of claims 1 to 46 for use in a method of treatment of psoriasis of the human or animal body by therapy.

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53. Use of a compound as defined in any one of claims 1 to 46 for the manufacture of a medicament for use in the treatment of a condition mediated by HDAC.

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54. Use of a compound as defined in any one of claims 1 to 46 for the manufacture of a medicament for use in the treatment of a proliferative condition.

55. Use of a compound as defined in any one of claims 1 to 46 for the manufacture of a medicament for use in the treatment of cancer.

20

56. Use of a compound as defined in any one of claims 1 to 46 for the manufacture of a medicament for use in the treatment of psoriasis.

57. A method inhibiting HDAC in a cell comprising said cell with an effective amount of a compound as defined in any one of claims 1 to 46.

25

58. A method for the treatment of a condition mediated by HDAC comprising administering to a subject suffering from a condition mediated by HDAC a therapeutically-effective amount of a compound as defined in any one of claims 1 to 46.

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59. A method for the treatment of a proliferative condition comprising administering to a subject suffering from a proliferative condition a therapeutically-effective amount of a compound as defined in any one of claims 1 to 46.

60. A method for the treatment of cancer comprising administering to a subject suffering from cancer a therapeutically-effective amount of a compound as defined in any one of claims 1 to 46.
- 5 61. A method for the treatment of psoriasis comprising administering to a subject suffering from psoriasis a therapeutically-effective amount of a compound as defined in any one of claims 1 to 46.

* * *